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TITLE: Treatment of PTSD-Related Anger in Troops Returning From Hazardous Deployments

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13. SUPPLEMENTARY NOTES

14. ABSTRACT
Objective: The long-term goal of the research is to provide an effective intervention for the prevention of secondary and escalating effects of poor anger control associated with trauma-related anger problems. The specific objectives are to adapt an existing evidenced-based cognitive-behavioral intervention (CBI) for the treatment of anger to specific needs of military personnel returning from hazardous deployments, and to conduct a pilot study providing preliminary data on the adapted intervention. Design: There are two phases in this project. In Phase 1, protocol therapists gained experience with the cognitive-behavioral intervention (CBI) for anger control, and the manual adapted to the needs of the population. In Phase 2, participants are randomly assigned to CBI or a Supportive Therapy Control (supportive intervention, SI) condition. Each condition includes a maximum of 14 sessions, 75 minutes in length. Progress: Phase I of the study has been completed with 14 participants (12 in CBI and 2 in SI) entering treatment. Of the 12 starting CBI treatment, 8 completed all sessions. Of the 2 SI participants, 1 completed and 1 did not. Termination and 3 months follow up assessments have been completed for phase I completers. Phase II is in progress. Fifteen subjects have been assessed, 13 have been randomized, 12 started treatment (6 CBI and 6 SI). Of the 6 CBI subjects, 4 have completed and 2 are in progress. Of the 6 SI subjects, 3 have completed, one dropped after 5 sessions, and 2 are in progress. Termination and 3 month follow-up assessments are completed as they are due. Findings: Phase I CBI participants who completed treatment showed significant improvement on the four anger indices. Although very preliminary, findings are encouraging for the efficacy of CBI for the treatment of anger symptoms following deployment related trauma.

15. SUBJECT TERMS
PTSD, Trauma, Anger, Treatment

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INTRODUCTION: The long-term goal of the research is to provide an effective intervention for the prevention of secondary and escalating effects of poor anger control associated with trauma-related anger problems. The specific objectives are to 1) adapt an existing evidenced-based cognitive-behavioral intervention (CBI) for the treatment of anger to specific needs of military personnel returning from hazardous deployments, and 2) conduct a randomized pilot study providing preliminary data on the efficacy and acceptability of the adapted intervention in this population. The first phase involved administering the adapted CBI to 12 participants, and a supportive intervention (SI) to two participants. Our experience in Phase I led to further revisions to the manual. The second phase targets 50 male and female participants, randomly assigned to receive either CBI or SI.

BODY: Since our last progress report, we have completed Phase I of the study. Of the 17 participants who signed consent forms, 3 did not enter treatment (either not returning further calls or changing mind due to job constraints). Of the 14 who started treatment, 12 were assigned to CBI and 2 to SI. Of the 12 CBI participants, 8 completed and 4 were non-completers. Two of the 4 non-completers dropped due to high levels of anxiety, making it difficult to sit through sessions and focus on the material (both were referred for alternative treatment). Of the two SI participants, one completed and one discontinued after 10 sessions due to obtaining a job. Post-treatment and follow-up assessments have been completed for Phase I.

As noted in our previous progress report we made a change to our inclusion criteria to target individuals who we believe are most appropriate for the treatment. Phase II excludes subjects with severe PTSD and also requires evidence that clinically significant anger problems have persisted for at least 3 months. Additionally, we made extensive changes to the CBI manual and smaller changes to the Supportive Intervention Manual as needed based on our phase I experiences.

Phase II is in progress. Fifteen subjects have met criteria. One was deferred due to desire to start on medication and was not randomized. One is about to be randomized. Thirteen have been randomized; of these 12 started treatment including 6 CBI and 6 SI. Of the 6 CBI subjects, 4 have completed and 2 are in progress. Of the 6 SI subjects, 3 have completed, one dropped after 5 sessions, and 2 are in progress. Termination and 3 month follow-up assessments have been completed for all treatment completers as they are due. The SI participant who dropped out after 5 sessions was sent to training and redeployed, and has not completed post treatment assessments.

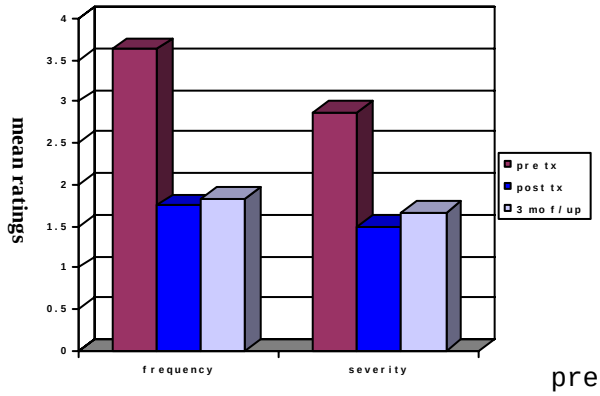
Data entry is in progress. Preliminary analyses of Phase I CBI completers showed significant improvement on the four anger indices examined (see table). Pre to Post Treatment Effect Sizes ranged from 1.1(Aggression Subscale from the Overt Anger Scale or OAS) to 2.9 (OAS irritability). Pre Treatment to follow-up Effect Sizes tended to be smaller but still ranged from 1.1 to 1.7. The figure below shows the change in mean scores from pretreatment to termination and 3 month follow-up for the CBI completers on the CAPS anger / irritability item.

Mean Scores at Pre and Post Treatment and 3 month f/up

	CAPS Anger*		OAS-M*	
	Frequency Mean (SD)	Severity Mean (SD)	Aggression Mean (SD)	Irritability Mean (SD)
Pre n=8	3.62 (.52)	2.87 (.35)	19.62 (14.52)	6.5 (.92)
Post n=8	1.75 (1.03)	1.5 (.75)	5.62 (9.98)	2.87 (1.55)
ES**	**2.3**	**2.3**	**1.1**	**2.9**
f/up n=6	1.83 (1.4)	1.66 (.97)	2.0 (2.13)	3.83 (3.3)
ES***	**1.7**	**1.7**	**1.7**	**1.1**

*Structured Interview; CAPS=Clinician Administered PTSD Scale;
OAS-M=Overt Aggression Scale Modified; **ES=pre to post treatment effect size (Cohen's d); ***pre treatment to follow-up effect size

CAPS Anger Rating: mean frequency and severity
Treatment of Trauma Related Anger Study



These preliminary findings show promise for the efficacy of CBI for the treatment of anger symptoms following deployment related trauma. Limitations include the small sample size, absence of follow up data on four participants not completing treatment, and absence of a randomized control condition in this early phase. Phase II will provide data from a randomized sample including a supportive therapy control. Other concerns include a slower rate of recruitment than we envisioned. We believe this has been partially influenced by the hiring of additional clinicians at the VAMC, our primary source of recruitment. We have increased recruitment efforts with distribution of pamphlets and posters throughout military demobilizations and facilities, and by advertising the study in military newsletters. Another concern is that we have been unsuccessful in recruiting women. Only 1 woman has entered the study (Phase I), and dropped out after 2 sessions. We are considering ways to increase recruitment of women.

KEY RESEARCH ACCOMPLISHMENTS:

- Preliminary findings show CBI treatment to be acceptable to military personnel reporting anger problems following deployment. Initial results of pre to post treatment change on our target measures of outcome are encouraging with regard to effectiveness of CBI in this population.

REPORTABLE OUTCOMES:

- Shea MT, Lambert JF, Sevin E, Howard J, Davis N. Treatment of PTSD-Related Anger in Troops Returning From Hazardous Deployments. Poster presentation, ISTSS (International Society for Traumatic Stress Studies) Annual Meeting, Baltimore MD, November 2007.
- Shea MT. Treatment of Anger Problems: Strategies and Effectiveness. Grand Rounds presentation, St. Luke's Hospital, New Bedford, MA, February 2008.
- Shea MT, Lambert JF, Sevin E, Howard J, Davis N. Treatment of PTSD-Related Anger in Troops Returning From Hazardous Deployments. Brown University 12th Annual Research Symposium on Mental Health Sciences, Providence RI, March 2008.
- Shea MT, Lambert JF, Sevin E, Howard J, Davis N. Treatment of PTSD-Related Anger in Troops Returning From Hazardous Deployments. To be presented at the annual meeting of the Society for Psychotherapy Research, Barcelona Spain, June 2008.

CONCLUSIONS:
CBI appears to be acceptable, and preliminary findings show promise in terms of effectiveness in treating anger problems in military personnel following return from hazardous deployment. Ongoing recruitment, particularly of women, will remain a priority over the next year. Increased knowledge regarding the treatment of trauma related anger in veterans following war-zone trauma will be important in addressing this common problem and preventing secondary consequences.

APPENDICES:
None.